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ABSTRACT

Many educational and psychological survey questionnaires contain item response categories which may have different meanings to different people. Students who had previously answered Pace's College Student Experiences questionnaire by checking one of four response categories (i.e. never, occasionally, often, very often) were selected to obtain a second set of responses to seven of the activities in order to test the extent of divergent meanings. Students from eight colleges representing four types of institutions were asked to indicate "never," "once or twice during the year," "about three to six times during the year," "about one or twice a month," "about once a week," or "more than once a week" to the following activities: (1) used library card catalogue; (2) made appointment with a faculty member; (3) summarized class notes; (4) attended a student event; (5) asked opinion of peers on one's writing ability; (6) identified with a character in a book; and (7) had philosophical discussion with peers. Results indicated overlap between what is meant by occasionally, often, and very often. These terms signified somewhat greater frequency at selective liberal arts colleges and somewhat less frequency at comprehensive colleges, with denominational colleges and state universities falling in between. (RL)

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THE MEANING OF RESPONSE CATEGORIES: HOW OFTEN IS "OCCASIONALLY", "OFTEN", AND "VERY OFTEN"?

by

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Many educational and psychological survey questionnaires contain item response categories which, despite common language, may have different meanings to different people. Examples of such response categories are "occasionally", "often", and "very often"; or "some", "quite a bit", and "very much". Many surveys of college students activities, attitudes, and judgments have comparative ratings of this type. If there are substantial differences in the way people interpret the labels, then, unlike standardized objective test data, inter-institutional comparisons are of questionable value, or at least require cautious interpretation.

In Pace's College Student Experiences questionnaire there are checklists of activities. Students respond to the directions "In your experience at this college during the current school year, about how often have you done each of the following?" by checking one of four response categories: never, occasionally, often, very often. The activities are, for the most part, quite explicit so that one can recall reliably whether it is an activity one has or has not engaged in during a fairly recent period of six or seven months: for example "attended a concert or other musical event at the college", "worked on a committee",

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"used a dictionary or thesaurus to look up the proper meaning of words". The response "never" obviously means the same to everyone. But "often" at Amherst may not be the same as "often" at UCLA; and, for that matter, be the same for different students within Amherst or UCLA!

To test the extent of divergent meanings and thereby explore the implications for interpreting the results, a second set of responses was obtained from the students to seven of the activities at a later point in the questionnaire. This second set of responses was introduced and defined as follows: "When you answered the statements about how often you had done various things during the school year, you answered them by indicating 'never', 'occasionally', 'often', or 'very often'. We have picked out a few of those statements which we now want you to answer in a more exact way. For each of the items below, fill in one of the spaces to the left which best indicates the number of times you have engaged in the activity during the current school year." The more specific response definitions were as follows: "never", "once or twice during the year", "about three to six times during the year", "about once or twice a month", "about once a week", and "more than once a week". The activities selected for this second round of responses were ones which illustrated different types of content in the questionnaire (academic, personal, and social), and which had a relatively small percentage of students who had initially checked "never", and which initially had relatively similar percentages checking each of the other categories. These criteria assure that maximum variability can be discovered. The activities selected were the following: "Used the library card catalogue to find what materials there were on some topic", "Made an appointment to

meet with a faculty member in his/her office", "Summarized major points and information in your course readings or class notes", "Attended a program or event put on by a student group", "Asked other people to read something you wrote to see whether it was clear to them", "Identified with a character in a book or movie and wondered what you might have done under similar circumstances", "Had serious discussions with students whose philosophy of life or personal values were very different from yours".

During the spring of 1979 and 1980 more than 9,000 students from 30 different colleges and universities responded to this questionnaire. In most places the students were a good cross section of undergraduates, but because some schools tested special groups rather than a representative group, we reduced the number of cases to 7,853. It is this base which we have used to show the total diversity in student responses. Then, to explore differences between institutions we selected eight schools which had the best representative samples and which reflected different institutional types: two private non-sectarian, highly selective liberal arts colleges; two denominational and less selective liberal arts colleges; two public doctoral granting state universities; and two comprehensive colleges, one public and one private. Of these eight schools, four are primarily residential, three are mainly commuter schools, and one is in between. They range in size from 1,000 to 30,000. If there are, indeed, important differences in what students mean by occasionally, often, and very often, they should emerge from this very diverse group of eight schools.

Here, then, are the results.

In the first set of tables we show, for each of the seven activities, the complete spread of individual differences in student definitions. For example, with respect to the activity "used the library card catalogue", among students who had initially checked "occasionally", 2 percent subsequently said "never", 32 percent said "once or twice a year", 41 percent said "about three to six times a year", 20 percent said "about once a month", 4 percent said "about once a week", and 1 percent said "more than once a week". We should note immediately that we did not ask students to look back for their previous response to the item, and since there were 139 items we doubt that any of them did. To some extent, the existence of implausible responses may suggest some looseness in the students' reports--for example, one who initially said "occasionally" or "often" and subsequently said "never" or vice versa; or one who initially said "occasionally" and who subsequently said "more than once a week". There are, indeed, some implausible responses of this sort, usually about five or six percent.

From the tables showing the complete spread of individual differences in definitions for each activity one can clearly see that in all cases there is considerable overlap between what is meant by occasionally, often, and very often. Nevertheless, in all cases, there is also a clear concentration of responses within each category and a clear direction of greater frequencies as one moves from occasional to often, and from often to very often. The brackets were drawn to highlight these differences. In each table the brackets enclose from 3/4 to 9/10 of the responses.

The crucial matter to be examined is not the simple existence and extent of individual differences; it is whether individual differences are selectively distributed and clustered in ways that would invalidate the integrity of inter-institutional comparisons and norms. It turns out that the major differences in the meaning of the response categories are ones related to the topic or specific activity; and that, given the same topic, the differences between colleges, and between different groups of students within colleges, are minor.

The next table shows the differences related to topics. The rating scale is a six-point scale as defined in the table. For the activity from the "writing" scale, occasionally typically means midway between "once or twice a year" and "three to six times a year"; and very often typically means "about once or twice a month". For the activity from the course learning scale, however, occasionally typically means midway between "three to six times a year" and "about once or twice a month"; and very often typically means "about once a week". One can see in the table that the difference in definition by topic, for each category, is roughly a full point on the rating scale.

In contrast, as shown in the next set of tables, the differences in mean ratings between schools are much smaller. With respect to the definition of "occasionally" the maximum difference between any two schools is generally a little less than .5 of a point on the rating scale; for "often" the maximum difference is generally .6; and for "very often" the maximum difference is a bit less than .7. Another indication of similarity, however, is the median difference between all pairs of means. Using this measure, the typical difference between

institutional means is only .2 of a point on the six-point rating scale. Given this very small typical difference, for each category and for every activity topic, we believe that inter-institutional comparisons can be made, and norms can be used, with a reasonable degree of fairness and validity.

In so far as we were able to compare differences between students within a college, although our ability to do this was limited by the small number of cases one comes down to, we found no differences of more than .3 in the mean ratings of men and women in 40 out of 42 comparisons, and no differences between lower classmen and upperclassmen in 34 out of 39 comparisons. Between students divided according to their grades (mostly B+ or better, mostly B, and mostly B- or lower) we found differences in 14 out of 34 comparisons, but there was absolutely no pattern to those differences. In a few instances it was also possible to compare science majors and social science majors; and in 12 out of 17 such comparisons there were no differences.

Although, based on the median similarity of definitions among the eight schools, we concluded that inter-institutional comparisons were reasonably fair, there are two modifications that should be considered. When we looked at the means at each college separately, as in a case study, it was apparent that College B was usually different from the others. With only one exception, "frequent" at College B is "more frequent" than at most other colleges. To some extent this is also true about College A; and exactly the opposite is true about Colleges G and H. Colleges A and B are highly selective private liberal arts colleges. Colleges G and H are comprehensive colleges,

one private and one public, urban and non-residential.

Comparative judgments necessarily reflect some reference point in the mind of the judge. Whether an activity is judged to be occasional, often, or very often presumably reflects an awareness of what is customary, either in one's own behavior or in the behavior of some familiar group. In our questionnaire we assume that the college peer group is the reference group for deciding whether one's own activity is occasional, often, or very often. If one is on a college campus where student involvement in academic and other activities is extensive, vigorous, and full-time, the word "occasional" may indeed signify a more frequent occurrence than it would on a campus where there were many commuters, more part-time students, and less overall involvement in campus life.

We do not yet have enough data to test convincingly whether the differences we noted between Colleges A and B compared with G and H are examples of a larger trend, but we suspect they are. In our total data base we had eight highly selective private liberal arts colleges (similar to schools A and B); we had eight less selective liberal arts colleges, some denominational and some not (similar to schools C and D); we had three doctoral granting universities; and five comprehensive colleges and universities (similar to schools G and H). For each of the seven activities, we computed the mean definitional ratings attributed to occasionally, often, and very often, grouping the results according to the four types of schools. This larger data base confirms what we had previously noted. With respect to most activities, the terms occasional, often, and very often, do indeed signify somewhat greater

frequency at selective liberal arts colleges and somewhat lesser frequency at the comprehensive colleges, with the other two types falling between. The final table shows these results. Although the differences between the means are never more than .6, and usually are about .4 between the highest and lowest type, the fact that many are in a consistent direction indicates that inter-institutional comparisons between institutions of a similar type would be based on more homogeneous definitions of frequency categories.

INDIVIDUAL DIFFERENCES IN MEANING ATTRIBUTED TO EACH RESPONSE CATEGORY

TOPIC: Used card catalogue in library

Percent defining their activity as:	Among students who had checked Occasionally	Often	Very Often
Never	2	0	0
Once or twice a year	32	4	3
3 to 6 times a year	41	23	12
1 or 2 times a month	20	42	31
About once a week	4	24	34
More than once a week	1	7	21
	100	100	100

TOPIC: Made appointment to see faculty member

Percent defining their activity as:	Among students who had checked Occasionally	Often	Very Often
Never	4	0	0
Once or twice a year	37	6	2
3 to 6 times a year	38	24	9
1 or 2 times a month	18	45	33
About once a week	3	21	35
More than once a week	0	4	21
	100	100	100

TOPIC: Summarized points in readings or class notes

Percent defining their activity as:	Among students who had checked Occasionally	Often	Very Often
Never	10	3	0
Once or twice a year	21	6	2
3 to 6 times a year	26	12	6
1 or 2 times a month	24	27	18
About once a week	13	32	30
More than once a week	6	20	44
	100	100	100

TOPIC: Asked others to read something you wrote

Percent defining their activity as:	Among students who had checked Occasionally	Often	Very Often
Never	10	1	0
Once or twice a year	48	18	7
3 to 6 times a year	27	33	19
1 or 2 times a month	12	35	37
About once a week	3	11	26
More than once a week	0	2	11
	100	100	100

N = 7853

INDIVIDUAL DIFFERENCES IN MEANING ATTRIBUTED TO EACH RESPONSE CATEGORY
(continued)

TOPIC: Attended a student program or event

Percent defining their activity as:	Among students who had checked Occasionally	Often	Very Often
Never	8	1	1
Once or twice a year	33	8	3
3 to 6 times a year	29	22	8
1 or 2 times a month	23	42	28
About once a week	6	23	35
More than once a week	1	4	25
	100	100	100

TOPIC: Identified with a character in a book or movie

Percent defining their activity as:	Among students who had checked Occasionally	Often	Very Often
Never	4	0	0
Once or twice a year	44	11	4
3 to 6 times a year	31	23	9
1 or 2 times a month	16	38	25
About once a week	4	20	29
More than once a week	1	8	33
	100	100	100

TOPIC: Had serious discussions with students having different values

Percent defining their activity as:	Among students who had checked Occasionally	Often	Very Often
Never	6	1	0
Once or twice a year	32	8	4
3 to 6 times a year	29	17	6
1 or 2 times a month	23	33	20
About once a week	8	26	27
More than once a week	2	15	43
	100	100	100

N = 7853

DIFFERENCE IN MEAN FREQUENCY RATINGS* BETWEEN TOPICS

Topic	Mean rating at eight schools for Occasionally	Often	Very Often
Writing	2.6	3.5	4.0
Personal experiences	2.8	3.8	4.7
Faculty	2.9	3.8	4.7
Library	2.9	4.1	4.5
Organizations	3.0	3.7	4.7
Acquaintances	3.2	4.2	4.9
Course Learning	3.5	4.4	5.1
Maximum difference	.9	.9	1.1

1 = never
2 = once or twice during the year
3 = about three to six times during the year
4 = about once or twice a month
5 = about once a week
6 = more than once a week

* definition of rating scale

DIFFERENCES BETWEEN SCHOOLS IN THE MEAN RATINGS OF DESCRIPTIVE CATEGORIES

TOPIC: Used the library card catalogue to find what materials there were on some topic

Institutions	Mean ratings for Occasionally	Often	Very Often
A	2.9	4.0	4.5
B	3.0	4.5	4.9
C	3.0	3.9	4.4
D	2.9	3.9	4.5
E	2.8	3.9	4.2
F	3.0	4.1	4.7
G	2.8	4.1	4.2
H	2.9	4.1	4.4
Mean	2.9	4.1	4.5
Median difference between pairs	.1	.2	.2
Maximum difference between any pair	.2	.6	.7

TOPIC: Made an appointment to meet with a faculty member in his/her office

Institutions	Mean ratings for Occasionally	Often	Very Often
A	3.1	4.0	4.5
B	3.1	4.2	4.6
C	2.9	3.6	4.4
D	2.8	3.8	4.6
E	2.8	3.7	4.4
F	2.9	3.9	4.9
G	2.6	3.6	4.3
H	2.7	3.7	4.4
Mean	2.9	3.8	4.5
Median difference between pairs	.2	.2	.2
Maximum difference between any pair	.5	.6	.6

TOPIC: Summarized points and information in your course readings or class notes

Institutions	Mean ratings for Occasionally	Often	Very Often
A	3.5	4.6	5.1
B	3.1	4.2	4.5
C	3.5	4.3	5.0
D	3.7	4.4	5.2
E	3.7	4.5	5.1
F	3.5	4.5	5.0
G	3.4	4.4	5.2
H	3.5	4.4	5.3
Mean	3.5	4.4	5.1
Median difference between pairs	.2	.1	.2
Maximum difference between any pair	.6	.4	.8

DIFFERENCES BETWEEN SCHOOLS IN THE MEAN RATINGS
OF DESCRIPTIVE CATEGORIES
(continued)

TOPIC: Attended a program or event put on by a student group

Institutions	Mean ratings for Occasionally	Often	Very Often
A	3.3	4.0	4.8
B	3.3	4.2	5.0
C	3.3	4.0	4.6
D	3.1	4.0	4.6
E	2.9	3.6	4.7
F	2.8	3.8	5.0
G	2.6	3.4	4.8
H	2.8	3.6	4.2
Mean	3.0	3.7	4.7
Median difference between pairs	.3	.2	.2
Maximum difference between any pair	.7	.6	.8

TOPIC: Asked other people to read something you wrote to see whether it was clear to them

Institutions	Mean ratings for Occasionally	Often	Very Often
A	2.4	3.4	3.9
B	2.6	3.8	4.3
C	2.9	3.5	4.0
D	2.6	3.5	4.1
E	2.4	3.3	4.1
F	2.6	3.2	3.6
G	2.5	3.3	4.0
H	2.6	3.4	4.1
Mean	2.6	3.5	4.0
Median difference between pairs	.2	.2	.2
Maximum difference between any pair	.5	.6	.7

TOPIC: Identified with a character in a book or movie and wondered what you might have done under similar circumstances

Institutions	Mean ratings for Occasionally	Often	Very Often
A	2.9	3.6	4.8
B	2.8	4.0	4.9
C	2.7	3.9	4.2
D	2.9	3.9	4.7
E	2.8	3.5	4.9
F	2.7	3.9	4.5
G	2.6	3.7	4.7
H	2.8	3.6	4.7
Mean	2.8	3.8	4.7
Median difference between pairs	.1	.2	.2
Maximum difference between any pair	.3	.5	.7

DIFFERENCES BETWEEN SCHOOLS IN THE MEAN RATINGS OF DESCRIPTIVE CATEGORIES
(continued)

TOPIC: Had serious discussions with students whose philosophy of life or personal values were very different from yours

Institution	Mean ratings for Occasionally	Often	Very Often
A	3.4	4.4	5.1
B	3.3	4.8	5.3
C	3.0	4.0	4.6
D	3.1	4.0	5.0
E	3.1	4.2	5.1
F	3.1	4.0	5.1
G	3.1	4.0	4.6
H	3.0	3.8	4.7
Mean	3.2	4.2	4.9
Median difference between pairs	.2	.2	.3
Maximum difference between any pair	.4	1.0	.5

MEAN DEFINITIONAL RATINGS FOR EACH ACTIVITY TOPIC--BY TYPES OF SCHOOLS

	Library	Faculty	Course Learning	Organizations	Writing	Personal	Acquaintances
Definition of "occasionally" at							
8 LA I	3.2	3.2	3.1	3.2	2.5	2.9	3.2
8 LA II	3.1	2.9	3.5	3.2	2.7	2.8	3.0
3 DU	2.8	2.8	3.3	2.8	2.4	2.7	3.1
5 CUC	2.9	2.7	3.4	2.7	2.5	2.7	2.9
Definition of "often" at							
8 LA I	4.1	4.2	4.2	4.2	3.5	4.0	4.5
8 LA II	4.0	3.9	4.6	4.0	3.6	3.9	4.0
3 DU	4.1	3.9	4.4	3.7	3.1	3.9	4.2
5 CUC	4.0	3.7	4.4	3.6	3.4	3.8	4.0
Definition of "very often" at							
8 LA I	4.9	5.0	5.0	5.0	4.2	4.9	5.2
8 LA II	4.7	4.5	5.3	4.7	4.3	4.6	4.7
3 DU	4.6	4.5	5.1	4.7	4.1	4.8	5.0
5 CUC	4.5	4.6	5.2	4.4	4.1	4.8	4.9